Assessing the Potential Health Hazards of Urban Agriculture

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[Photo: Millions of people around the world practise urban agriculture.]

Urban and peri-urban agriculture — the cultivation of crops and rearing of livestock in and around cities — is practised by millions of people around the world. Over the past 20 years, development organizations have promoted urban agriculture because it provides food and economic opportunities for people who live at or near subsistence levels. But as researchers amass data about this survival strategy, they are identifying health hazards that need to be addressed.

"This aspect of urban agriculture has traditionally been understudied," says Kathleen Flynn. As a summer intern with the Cities Feeding People (CFP) program initiative of the International Development Research Centre (IDRC) in 1999, Flynn authored a report that discusses several of the public health issues surrounding urban agriculture.

Peri-urban farming

According to Flynn, the urban or peri-urban farmer is generally trying to improve on a rather meagre existence. For example, peri-urban areas — the transitional zones between cities and the rural countryside — often lack services such as electricity and running water, although they may have regular transportation into the city, where the peri-urban commuters obtain wage labour. Typically, many peri-urban residents also engage in vegetable farming, both for private use and to raise produce to sell in the city's markets.

Flynn notes that while some health hazards (such as diseases that spread from cattle kept in densely populated areas) are the direct result of farming practices, other risks (such as from toxic chemicals that are consumed in food grown in contaminated soil) are the result of underlying environmental conditions. But in any case, she says, people who rely upon their crops or livestock to feed their families or provide badly needed income are not likely to abandon unsafe farming practices in the face of more immediate hardship.

Reducing the risks

Consequently, strategies must be found to reduce the potential hazards whenever possible. In fact, many solutions are already available. For example, although plants absorb heavy metals such as

cadmium from contaminated soil, some vegetables such as cabbages and tomatoes concentrate relatively fewer of these toxic compounds in their edible parts than do others. So by choosing crops carefully, the effects of soil-borne contaminants can be minimized. It is also possible to reduce the impact of heavy-metal contamination by working well-decomposed organic matter into the ground. Organic compost 'fixes' heavy metals in the soil, resulting in relatively little uptake by plants.

Research regarding urban livestock-keeping is less advanced. But important health issues are becoming apparent as what were formerly considered pastoral diseases migrate to urban areas. One such disease is echinococcosis, an infection caused by a larval form of canine tapeworm. Some reports correlate a high rate of human infection with informal slaughtering practices in heavily populated regions. In Nepal, "people do [this] in their homes, in the roadside, and on the riverbanks of Kathmandu," says Bertha Mo, a Senior Program Specialist at IDRC. Proposed remedies include trying to control the numbers of stray dogs roaming nearby, and altering slaughtering practices.

Cultural considerations

Flynn stresses, however, that any interventions should take local cultural norms, such as those that involve the slaughter of animals, into account. "Including this from the moment of policy conception ... will be much more efficient than a policy that fails to consider those factors, and that therefore ultimately fails."

Similarly, policy makers must recognize that factors such as gender and age affect the reality of urban farming, she adds. For example, a Saudi Arabian study of brucellosis or undulant fever — a bacterial infection transmitted from cattle and dairy products — showed that women were most commonly infected between the ages of 15 and 64. However, men aged 65 and over had higher infection rates than women of the same age group. One possible explanation is that the division of labour was segmented according to age and gender.

Policy issues

In the future, states Flynn, public health studies involving urban agriculture should be designed to provide gender-disaggregated knowledge. "Many policies are conceived in terms that purport to be gender neutral. Unfortunately, in practice there is very little if anything that is gender neutral." Therefore, policies need to openly incorporate factors such as the social relations between men and women that lead to the division of labour. They must also recognize each sex's relative obligations within the community and with government, she argues.

Flynn is currently in Ghana conducting research on gender and access to land resources in peri-urban farming. Meanwhile, a new study of zoonoses — diseases that can be transmitted from animals to humans — has been launched by CFP intern Gisèle Hachom-Nitcheu.

Curt LaBond is an Ottawa-based freelance writer. (Photo: courtesy of Cities Feeding People)

If you have any comments about this article, please contact info@idrc.ca .

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